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INDUSTRIAL AND TECHNICAL TRAINING IN THE SECONDARY SCHOOLS AND ITS BEARING ON COLLEGE-ENTRANCE REQUIREMENTS

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To anyone interested in the development of the secondary schools, this problem of industrial and technical training offers a most inviting field of investigation. The rapidity with which the various forms of manual training are being introduced into the schools seems to indicate a rapid increase in the popular demand for this type of motor education; due, no doubt, to the fact that manual training, after a long period of struggle and experiment, has finally won a glorious victory and established beyond question the justice of its claims to a position in the curricula of both the primary and the secondary schools.

The statistics of the United States Bureau of Education show clearly that manual training is being introduced into the secondary schools at a rapidly accelerating rate (cf. *Report for 1904*, Vol. II, p. 2057). We there learn that, of 588 school systems in towns of 8,000 inhabitants and over, only 37 had introduced this work in 1890. Ten years later, this number had increased to 169; a gain of 132 in ten years, or 13 a year. From 1900 to 1903 this number increased to 322; a gain of 153 in three years, or 51 a year. In the single year from 1903 to 1904 the increase in this number was 89, making a total of 411 of the 588, in which this type of work was given.

These facts are, of course, familiar to everyone interested in the secondary schools. They are mentioned here simply because

it is important, in considering the question of the introduction of industrial and technical training, which are but extensions of manual training, to recognize at the start that the educative value of motor training of the right sort is no longer a matter of debate. Experience has now abundantly proved that this sort of training is capable of producing educational results of a high order. We have learned that this work does not consist in developing manual dexterity alone; but that it is one of the best, if not the only way, to build up in the child the ability to react promptly in any situation in which he is placed, to think more clearly and definitely than is possible without this work, and to form in him the habit of trying to see things as they really are.

Since the value of motor training has thus been proven by experiment, it is interesting to trace the reaction of these experiments on educational theory. For all real advance in education, like all real progress in science, is made by one and only one method; namely, the scientific method of theory and experiment and experiment and theory. Without this constant interplay between theory and experiment, nothing very definite results, and we are very prone to forget Lincoln's remark that a man's legs must be long enough to reach to the ground.

But to proceed. The older educational theory was like the atomic theory of Democritus and Lucretius. These philosophers conceived that the varied phenomena of the material world about them were produced by hard, round, indivisible particles, each possessed of so little individuality that the eye of man—nay, even the eyes of the gods—could not distinguish the one from the other. They were, in fact, so much alike that Herschel and Maxwell said that they bore all the ear marks of having been manufactured in the same mold. They were supposed to be inert and lifeless, and to react on one another in producing the complexity of natural phenomena the Lord only knew how. So in educational theory. Each individual was to become a Lucretian atom in the human world. He was to be hard, round, indivisible, possessed of no individuality, and able to react on other atoms—if at all—in a way not satisfactorily explained.

by the theory. The type of this educated atom was the college-bred man; and, since all could not be completely manufactured by going to college, the best that could be done for those who must fall by the wayside was to grind off as many of their personalities as was possible in the time which they could devote to the process.

But recent experiments in science have driven us to the idea that the atom is self-active, and teeming with an incredible amount of life of its own. So that instead of imposing inactivity and uniformity on the atom on *a priori* grounds, we are now trying to liberate these atoms more and more in order that we may find out by experiment what they will do. Similarly with the human atom; and the manual-training experiments have been among the most useful in helping us to free this atom and to find out what it will do.

This fundamental change of attitude toward the atom has of necessity brought with it numerous important secondary conclusions. Since the self-activity of the atom is its fundamental characteristic, we see that an atom is a success in proportion as its activity is directed into right and useful channels; or, in other words, the success of an atom's education is measured by its ability to produce, rather than by its ability to reproduce the works and words of others. We have also learned that this ability to produce is developed solely by producing. That individuality is the most precious of human traits is also becoming clear. We have also begun to believe that a thing is not necessarily educationally useless, simply because it happens to be practically useful: and that we are not necessarily fostering ideals of the market place (assuming that such ideals are as low down as some suppose them) by making use of these useful things as objects of instruction and of construction.

Conclusions similar to those derived from the manual training movement are being reached by the psychologists as the result of their extensive investigations on children. Capital surveys of some of this work are given in O'Shea's *Dynamic Factors in Education*; Baldwin's *Development of Mind in the Child and in the Race*; Hanus' *Educational Aims and Educa-*

tional Values, and many others. This work has been of tremendous assistance not only in establishing the conclusions just stated, but also in determining under what conditions motor training is really educational.

We might spend many days discussing this work and its results. I assume that you are all familiar with them, or that you will soon become so. The particular result in which we are interested today is this: That there can no longer be any doubt that motor training is an essential part of every child's education; and that such training furnishes in many, if not in all cases a better basis for a sane education than that furnished by the older static type of work. Applying this conclusion to our subject, it seems to mean that, far from there being any psychological objection to the introduction of the extended forms of manual and industrial training into the schools, there is every encouragement for the step. Thus educational theory approves of the motor training, and declares it to be an essential part of every child's education.

Yet, notwithstanding this approval of this work from both the experimental and the theoretical side, and notwithstanding the fact that some forms of this work are being introduced at a rapid rate, we hear the cry on all sides that more of this work is needed. It is the same cry, whether it calls for more plumbing and bricklaying and carpentry, or for more concrete and practical work in physics and chemistry. The cry was so well voiced by Superintendent E. G. Cooley, of Chicago, last winter in an address before the Illinois Federation of Women's Clubs, that I cannot bring it better before the reader than by stating his argument. So far as I know, the address has not been printed, so this outline is from notes made at the time. It ran like this:

The content of education has been determined by its utility in all times and ages; for example, in the Middle Ages it was for the clergy; in the Reformation, its purpose was to teach the children to read *the* book. From these sources the ideal of books became dominant and has remained so. But executive instincts must be trained, not alone the receptive faculty. Educational schemes must connect with motor impulses. History shows that knowledge is sought primarily for practical ends. Hence the individual

must be educated in the lines along which society is moving, or he becomes a misfit. In the past, the high school has catered more to the colleges than to the public. It must now turn to the public and take up vocational work. Few things are more wasteful than work dominated by college ideals for a student with practical tastes. The schools cannot be the people's schools under the present conditions because they refuse to recognize the educational value of making a loaf of bread or of drawing a gas engine, but only that of demonstrating an abstract proposition in mathematics.

This is characteristic of what seems to be a very general and constantly growing opinion, namely, that the present situation demands an extension of the motor work into industrial and technical, or what might be termed vocational lines. But there are two other lines of argument that lead to the same conclusion.

The first comes from the social side. The study of the rapid falling off in attendance at school after the fifth grade has led to some interesting conclusions. Thus Superintendent L. D. Harvey, of Menominee, Wis., at the last meeting of the Department of Superintendence of the National Educational Association said (cf. *Report for 1907*, p. 170) :

In every city of any considerable size there are a large number of children who do not complete the course of study in the elementary schools. . . . The recent report of the Massachusetts commission appointed by the governor to investigate this subject disclosed the fact that there were twenty-five thousand children in that state between the ages of fourteen and sixteen who were not in the public or the private schools, and that if they were employed in any gainful occupation, it was of the lowest class of unskilled labor, commanding a very low rate of wages, and with little or no prospect for advancement to a higher and better-paid class of labor.

Observation in almost any city will disclose conditions similar to those found in that state. The children have left the schools for a number of reasons. . . . They are not interested in the work of the schools; the immediate opportunity to earn even a few dollars a month appeals to them with greater force than do the problematical benefits of further schooling. In many cases this indifference is due to the fact that the character of the work in the elementary schools, making as it does little or no demand on the motor activities of the child, does not appeal to them. . . . Many of them, who do secure employment, enter upon it under conditions which are the worst possible, both for the moral and the physical development of the child. From this class a large number of the recruits come for our charitable and penal institutions later on. Such a class, lacking in opportunity, hope,

and aspiration, in an environment most depressing, is a menace to society and to the state. There will always be such a class, but the question which interests those who are interested in the welfare of society is: How large shall this class be?

. . . In recent years educators have been studying this problem and a marked change is evident in their view of the inadequacy of our present educational system. They are coming to recognize that the fundamental thing in educational effort is to develop the capacity to earn a livelihood. Because further development along cultural or other lines is conditioned by the capacity of the individual to support himself, they are recognizing that this demands the introduction of industrial education in training young people to do something with their hands, as well as to know something of what other people have thought and done.

At the same meeting, Superintendent F. B. Dyer, of Cincinnati, said:

The reasons for stopping may be classified under two heads: necessity and inclination, and the latter is probably more general and fundamental than the former, for when the inclination to stop is strong, the necessity can readily be demonstrated.

Whether these statistics are representative or not (and I believe they are), all will concede that our great cities are permitting to develop a large proletariat whose rule is king mob. Many of these youths take minor positions, which they soon outgrow; but they get no farther, for they are fitted for nothing better. There is danger of their becoming loafers at eighteen and criminals at twenty. If they go to the factories, they are likely to make poor, incompetent workmen; the modern factory system scarcely allows of apprentices, and in the few remaining trades such apprentices are neglected, and the quality of the work degenerates. An industrial system that is largely recruited from the illiterate and incompetent, with no means of self-improvement, will not long be able to compete with the systems of other countries, whose rank and file are skilled and intelligent artisans, elaborately trained in the theory and the practice of their special vocations.

General industrial schools are necessary. From a study of foreign systems it appears that general industrial schools should be opened in our cities. They should admit pupils fourteen years of age upon very easy terms as regards scholarship.

Those who have not completed their elementary schooling (who, you will remember constitute three-fourths of the attendance) should continue in the most essential studies, but their promotion should depend on their advancement in industrial work. Attendance, either in day or evening schools, should be compulsory under 16, except as excused by central authority.

From quite another point of view we have another expres-

sion of the need of industrial and technical training in our elementary and secondary schools. In his convocation address at the University of Chicago last December, Hamilton Wright Mabie said (*University Record*, January, 1907, p. 89):

This is the age of the skilled man. The tragedy of the time, as I see it, is not the tragedy of the bad man or the bad woman—that tragedy is as old as history; but the special tragedy of our time is the tragedy of the "half-trained man" or the "half-trained woman." It is the tragedy of the man who is willing to do anything that he can get to do, but who has no special facility for doing any one thing; or of the woman who is willing to do anything that is consistent with honor, but who has no training for any special kind of work. It is a tragedy of a desire to work, without training for dealing with the tools or the material.

There is only one man in our modern society, from the economical side, that is safe, and he is the man who can command his position by the superiority of his skill.

Hence it appears that more training in the schools in practical and strictly useful lines is being demanded, not only on educational grounds, but also on social grounds. For if there are 25,000 children in Massachusetts between the ages of 14 and 16 who are not in school, and who are either not employed at all, or working as the lowest class of unskilled labor without any future before them; and if a large number of recruits for penal and charitable institutions is derived from this class; and if the existence of this class is due in part to its members resenting the attempt of the schools to make either partial or entire clergymen of them (for the college course was originally designed for the clergy); then it is high time for the state schools to sit up and pay attention. These schools, if I am not very much mistaken, are established and supported by the state for the purpose of developing in the population the maximum degree of social sanity and economic efficiency. Hence, if the introduction of more industrial and technical work into these schools will add to their efficiency in accomplishing these ends—and there is a great mass of testimony tending to show that it will—no time should be lost and no effort spared till such work is established.

But there is a still larger aspect of this subject. For in our

modern world a state is not an isolated unit that can organize its affairs with utter disregard of the affairs of other states. The civilized world is today so bound together by ties of social and economic interdependence, that even a great nation like ours cannot with impunity refuse to observe and to take account of the actions of other nations when endeavoring to shape its own course. Applied to the practical problem before us, this means that we cannot afford to be blind to what is being done abroad in the establishment of industrial and technical schools for the training not only of head engineers and supervisors, but also of skilled hands to do the detailed work of manufacture.

The industrial and technical schools of Germany are now too well known to need description here. They have recently been treated at some length in Vol. XXXIII of the *Special Consular Reports* of our Department of Commerce and Labor. I would merely like to ask: How long may this country hope to compete successfully with Germany in the markets of the world for the sale of manufactured articles in whose making such skilled labor is required? Are our manufacturing interests of so little account that we, trusting largely to our native horse sense and good luck to make up for our lack of training, can afford to sit idly by while Germany and other nations are training thoroughly and carefully a great army of workers?

The federal and state governments seem to appreciate the value of industrial training in the case of agriculture, since agriculture is regarded as our most important national asset—and rightly so from the starvation and social points of view. These governmental authorities, as is well known, spend large sums annually on agricultural experiment stations and agricultural colleges. Yet the state schools have not yet waked up to the industrial situation in other lines, and comparatively little is being done for other kinds of industrial workers.

A comparative statement of the relative magnitudes of our agricultural and our manufacturing interests may not be amiss here. The figures are taken from the *Twelfth Census Report*, and give the conditions for the year 1900. In that year about ten million men, women, and children over ten years of age

were employed in agriculture in the United States. The total value of the produce was about five billion dollars, of which about one billion worth was fed to stock; so that the net value produced was about four billion dollars.

In the manufacturing enterprises the total number employed was about seven million, and the total value of the product was about thirteen billion dollars. The cost of materials and running expenses other than labor was about eight billion dollars: so the net value produced was about five billion dollars.

Hence in agriculture 10,000,000 produced \$4,000,000,000, and in manufactures, 7,000,000 produced \$5,000,000,000.

Still our schools are doing comparatively little for the manufacturing hands, notwithstanding the fact that industrial and technical studies have been proved to be capable of furnishing a splendid basis for school work—nay, even to be an essential part of it—and notwithstanding the further fact that the schools are now acknowledged to be up in the air looking for a headstone for the corner, when the stone that the builders rejected is lying in plain sight of all, and almost crying out for an opportunity to be of use.

I sincerely hope that what I have said will not be misinterpreted to mean that all our schools should be converted into industrial schools. This would, of course, be as foolish as the antique system of leaving all schooling to the clergy. What I do mean, however, is that motor training, including instruction in industrial processes, should be introduced into all the schools, and that a number of strictly industrial schools sufficient to meet the demand should be established.

That the demand would be large is shown by the large and flourishing correspondence schools that have sprung up as money-makers for individuals. These schools attempt to teach by correspondence to full grown men and women those industrial and technical subjects which the state should teach to them when children. The demand for this sort of instruction is so great that adults take this indirect and wasteful way of making up for their earlier shortage, pay for it from their own earnings, and doubtless also pay taxes to perpetuate for their children a

system that did not do its duty by them. It is stated on good authority that the number studying thus by correspondence is greater than the number enrolled in all the secondary schools and institutions of higher learning in the country.

In what has preceded the attempt has been made to show crudely that industrial and technical training is at present a crying need of our schools; first, because it has been proved by experiment to be capable of returns of a high order; second, because psychology and child-study have demonstrated that it is an essential part of everyone's education; third, because society demands it for the reduction of the idle class; and fourth, because the economic situation makes it imperative if we hope to retain our supremacy in the markets of the world. It would not be right to end this justification of motor training without at least stating its really final, all-inclusive, and complete justification. This comes from the side of philosophy. As it appears to me, the argument runs like this:

The governing factor in every man's action is the interpretation which he himself and of himself makes of the world about him. This interpretation consists in a system of beliefs which the man considers to be true. The highest function of the school is to help each individual in the formation of the best interpretation of which he is capable. I say *to help* purposely; for to construct an interpretation for someone else, or to impose it on him from without, is an utter impossibility. Interpretations are possible only when there are phenomena to be interpreted; and the basis of all real and vital interpretations is made up solely, in the last analysis, of the individual's own actual experiences with the concrete facts and phenomena of his own world. Hence the man who has had the broadest and most comprehensive series of experiences with facts and phenomena in the concrete is the one capable of the broadest and most comprehensive interpretation. Industrial operations are among the most fundamental of the possible concrete experiences of men. Therefore, for everyone a concrete experience with them is essential to the formation of an adequate world-interpretation.

Furthermore, a man's confidence in the truth or validity of his interpretation depends on his ability to use it in the correct prediction of future concrete experiences, and in the successful accomplishment of practical results in his concrete world. Hence, the wider a man's experiences with the concrete, the more extended the field in which he can test his interpretation, and the more comprehensive the truth in which he believes.

In order that industrial studies may furnish part of a man's data for his interpretation of the world, they must, of course, not be treated as mere handicrafts or trades. They must rather be presented as parts of that grand drama which is often called man's conquest over nature and over himself. When so presented, they become parts of the present world life, as well as parts of the world's history, because they have contributed to the present organization of society, and so are present in the finished product.

A very forceful statement of this same justification for the introduction of industrial work—applied science, let us call it—has been given by Henry James (the father) in his essay on "Morality and the Perfect Life." Speaking of our social institutions he says:

None of them is adequate fully to express man's spiritual unity, since the only adequate expression of that is the organization of the whole race in perfect fellowship, an organization not by human legislation, not by police, not by convention, but by God's legislation which is science.

It seems very much like jumping from the sublime to the ridiculous to take up now the latter portion of my theme—that topic, which, like Banquo's ghost, is always bobbing up serenely at most inopportune times to disturb the tranquillity of the feast—I mean the college-entrance requirements. Had it not been for this specter, the National Educational Association might have named its Committee on College-Entrance Requirements something else, and this present agitation for motor work might have been finished long ago. If we could but escape its blighting presence—so I have been told—our schools would soon begin to live normal lives and to turn out normal graduates.

I therefore hope that, in taking up this problem of industrial training, we may be able to get such a start on this specter that it will never be able to play the bogey man with us or to cause anyone sleepless nights with its fervid hocus-pocus. Let us start this new work new, and recognize that, from the point of view of the public high school, the college-entrance requirements are like the flowers that bloom in the spring—they have nothing to do with the case. The state schools owe this training to the people of the state for educational, social, moral, and economic reasons that cannot be gainsaid. Should they be deterred from this mission because there are still in some colleges a few doubting Thomae who question whether things can be useful and cultural at the same time?

College-entrance requirements have done an enormous amount of good to the school systems of this country, and they are admirable institutions when they are framed by those whose devotion to young people is greater than their devotion to their specialty. But all must agree that this is not always the case, and that the traditions of the Lucretian atom (*vide supra*) have often played a more prominent part in their formation than has the more modern knowledge of the self-active atom of today. So let us start right by acknowledging that, from the point of view of the public high school, the college-entrance requirements have no bearing whatever on the subject.

From the point of view of the private schools, the same is true. It is not incumbent on them, as it is on the state schools, to take any interest in this matter so long as their patrons are willing to pay for the college-entrance training.

From the point of view of the college, however, the matter is of great importance. If the schools are led to introduce this work because it is demanded by every line of argument, the colleges should be—and I am sure that they are and will be—the last to oppose or hinder the good work. Hence they will accredit all such work when it is well done, and will add to their own curricula studies which furnish the right sort of motor training for the college age suitably to complete the work of the other schools. This has, in a measure already been done

by the colleges; for schools of higher technical training already exist, and most of the colleges accept drawing and shop work as part of the work accredited for entrance.

In this connection it is interesting to note that in this country the founding of the higher schools has generally preceded that of the lower. The university and the college were founded first. Then came preparatory schools or academies, founded at first by private enterprise. Have you ever noticed that the United States Bureau of Education did not begin to gather the statistics of the public schools till 1882, ten years after it had begun to collect them from the private schools? That year it received reports from 263 public and 1,482 private high schools. In 1892, it received statistics from 2,812 public and 1,434 private schools, which shows how rapidly the number of public schools increased in the ten years after some of them became well established.

It looks as if the same course might be followed by the industrial schools. Technical colleges have been established. A number of technical and industrial schools have been founded by private enterprise. Is it not now time for the public schools to move?

The practical difficulties in the way of introducing this work are in many cases very great. Two, however, stand out as particularly hard to meet. These are first, the fact that public opinion is not yet fully educated up to the importance of the step. Though this difficulty is gradually decreasing, it will take some time yet before those of the public who especially need this training for social and economic reasons will be content with it, without looking longingly at the old-time college-entrance training as being in their opinion a little "sweller." The vainglorious striving after this old-time training by many children who particularly need the other sort is very pathetic; and in many cases it leads to the great tragedy of which Mr. Mabie spoke. Was it Mr. Dooley who rightly said: "They go to college to learn a lot of things that they don't want, and to want a lot of things that they can't have"?

The other serious difficulty is that of finding teachers com-

petent to do the work in a satisfactory manner. In surmounting this difficulty, the colleges, particularly those that have technical schools, can be of great service. But, they say, the colleges cannot begin training teachers for this work till there are places for them in the schools, and the schools cannot begin it till they can find the teachers; so neither does anything—particularly the colleges.

In solving this important problem, as in solving any scientific problem, the first step seems to be to gather together and to digest all the knowledge obtainable on the subject. The literature is now fairly large, and a number of experiments are in progress. Besides, there are the foreign schools to investigate. This information ought to be accessible to every primary and secondary and college man in the country. It seems certain that no very marked progress toward the solution of this problem will be made until a report no less complete than that of the Committee of Ten has been compiled. The work of drawing up such a report should be undertaken by the federal government, since the matter is really of national importance, or by some national organization that is capable of getting a sufficiently broad and representative consideration of both the industrial and the educational sides of the question.

No solution of the difficulties involved in this problem is attempted here, since such solutions would clearly be out of place before the appearance of a suitable report on the conditions which must be met. Numerous recent events tend to show that the public is waking up to this problem: how long must we wait for the much-needed report?

A GENERAL VIEW OF GERMAN PEDAGOGY FOR THE BENEFIT OF FOREIGNERS. IV

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How is it—to return now to this point—with the model that is presented by foreign countries? What is really worthy of imitation, and what is it possible to imitate? In France as well as in England, secondary-school education is quite predominantly connected with boarding-school education, for which in our case only more isolated opportunities occur. The advantage that this offers of an essentially more uniform education, not divided between a number of co-existing authorities, is evident. There is also a large number of well-to-do families in towns, which from their outward and inward circumstances are not really able to provide educational facilities. Moreover the right educational attitude on the part of the teachers is most easily attained where they do not merely come into contact with their pupils in school hours, but spend the whole day with them. And accordingly, in different places in Germany, schools have lately arisen with a new spirit, located in a rural community, and with opportunities for manifold country occupations, for pupils and teachers to live and work together in a human and intimate relationship, and all this moreover, in principle, without abandoning serious aims in instruction. The name "Country-Home School" (*Landerziehungsheim*) has in itself a welcome sound. There are, for instance, some of these, founded by Dr. Lietz in Haubinda, Ilsenburg, and Bieberstein. At the same time certain others with a somewhat different aim have grown up, such as the *Pedagogium* at Godesberg on the Rhine. Although these are all private undertakings, the state school authorities in Prussia have not of late closed their eyes to the necessity of encouraging so-called "alumniates," and it seems probable that much more will shortly be done in this direction. It is true that

for the present this will still be only for the well-to-do, and that great care will have to be taken that more harm than good is not done by boarding-school life; in France, where boarding-schools are an old and universal institution, the most passionate protests are being raised against them by people whose opinions are entitled to respect.

The above-mentioned country boarding-schools are in essential points copied from certain English schools (those at Abbots-holme and Bedales); but it has been very usual with us for some decades to point to English education as a model in other respects also. What every authority upon the subject likes in this latter is the large amount of personal liberty granted to the individual, the training in self-reliance, the great opportunities for physical exercise and for games, which are by no means lacking in seriousness, the encouragement of sport, the self-government entrusted to the youthful community with the mutual education which it involves; and all in all we are very ready to agree, where English education is praised as essentially character-forming, while ours only aims at training the intellect (and moreover along too narrow paths). It is true in the last decades not a few of the games of young English people have been adopted by us, in so far as local conditions, opportunities, equipment, and the interest of the teachers, allow. That this should gradually increase we desire and hope. But the adoption of the good qualities of other countries is not so simple as one is inclined to believe. Such things depend upon long tradition and a deeply rooted way of feeling, and it is a good thing not to forget to preserve one's own national virtues, and if possible to intensify and purify them. It is just in the case of peoples of independent importance that an educational ideal cannot be exchanged like a military uniform or a type of vessel. We cannot help feeling the lack of many things in the English ideal. It is not merely that a very fragmentary intellectual culture cannot but seem to us something unworthy (for instance an ignorance of the history of other modern civilized countries, which does not cause any surprise in England, that we do not feel ourselves drawn to this either by carelessness or by con-

siderations of utility, but further, even the training of character which has been mentioned is not by any means such an entirely splendid thing. It may very easily turn to inconsiderate self-will (in so far as it is not balanced by an elevated social consciousness). And the spending of half (or more than half) one's youth in play not only presupposes considerable ease of circumstances but also in many cases gives rise to a slack conception of the duty of work in after life, a state of affairs to which English critics are continually bearing witness with regret. It would indeed be wonderful if the nations could mutually exchange their good qualities, thereby correct their failings, and nevertheless preserve their individuality. Perhaps much may be done in the future by good-will in this respect. That more independence, more individual freedom of movement should be granted to our elder pupils is recognized by all who are capable of forming an opinion, and not least by the supreme authorities also.

English education has one institution in common with French which only occurs quite exceptionally in German schools, namely, the public and ceremonies conferring of prizes and distinctions. It is true that this institution has quite another significance in France to that in England: in the former it is to a far greater extent entwined with the national character and the whole organization of life. It is not a mere chance that we Germans reject this. We dread lest ambition should become a force of decisive influence where duty—duty toward one's own personal ability and toward the community in which one is to live—ought to become the determining factor from an early age; and it displeases us still more that vanity should also have no small voice in the matter. Moreover the absolute degree of ability ought not to come into consideration at all, but only the degree of trouble taken by each individual, his earnestness, and his efforts. The *opus operatum* should have as little importance in education as in religion. And teachers should altogether be restrained from devoting their care to those who are most gifted, in order to "shine" by means of their pupils. All should have the same claim to educational care, at any rate all who are morally

worthy. It is indeed not to be denied that we have gone too far in paying attention to those of average abilities and have thereby often neglected the more talented ones; accordingly the proposal has recently been made to create special schools for those who are specially gifted. But serious objections may be raised to the realization of this, and one must try to attain this end by other means instead. Much greater prospects of success however attach to the idea of dropping the uniformity of the demands upon the elder pupils in all branches of the curriculum, and encouraging the choice of favorite subjects, involving a higher final standard of proficiency, but a reduction of the requirements in the other subjects. The Prussian school authorities have already been won over to this idea, and it will find further encouragement.

So far only English and French examples have been referred to, but with regard to another point it is especially North America that must be considered in the question, namely, of the uniform and common education of the two sexes, coeducation. It may be said that opinion has become to a great extent favorable to it, and naturally it is more especially leaders in the general movement for the emancipation of women who exert themselves vigorously on its behalf. But apart from this, people are hardly anywhere inclined flatly to reject it, and every year sees the extension of the rights of girls and women to opportunities of education, which were formerly open only to the male sex. But it certainly goes step by step; and this, not merely because the weight of hostile tradition is greater in a country of old civilization than in the case of a young nation, but also because the belief in extreme standardizing from a single standpoint arises much more easily in the latter. Just as an elderly man is more cautious than a young one, so elderly nations may well be so too—may be so not merely because of their age but by reason of the greater circumspection which is possible in their case. And that an education of essentially equal *value*, but differentiated to suit the natural peculiarities of the sexes, would constitute a better solution of the question than simple similarity or identity, this view, once supported by our

noblest minds, will probably remain tenable now and in the future. But in any case the improvement of higher education for girls, in the sense both of making it less superficial and of bringing it into closer relation to the noblest problems of life, is in full progress, as will be shown by the plans shortly to be published for its reorganization in Prussia. Of course it is here only a question of the period between childhood proper and the age of real scientific study. Even for the future, it will hardly be impossible or prohibited that the ideal of woman, and so of woman's education, should undergo a certain modification at the hands of the particular nations.

With regard to the construction of the different branches of the curricula in general, there prevails no very fundamental diversity among the nations; a certain group of subjects is nowadays almost everywhere considered as indispensable. But beyond this there are wishes and protests enough with regard to particular questions. As is known, we have not clung so firmly to Greek as essential for university studies, as has hitherto been the case in England. But on the whole we are far from abandoning it with a light heart, or allowing it so little weight as has really long been customary in the Latin countries, and this in spite of the many individual voices which are raised demanding the ruling out of this language, or of the ancient languages altogether. Greater prospects of fulfilment exist in favor of the hope that the classical studies will be able to be pursued all the more intensively in the future by a limited number of pupils. Nothing of value can be expected from a superficial acquaintance with these languages. With us as elsewhere there has been in the last decades much racking of brains about the teaching of modern languages. One would fain see the rise of a real living ability to use them, and yet at the same time secure for this kind of instruction a greater educational value. The simple imposition by the officials of the "natural method" or *méthode maternelle* as in France, would be impossible in our case, in view of the caution and reserve of our authorities with respect to questions of personal method. It is left more to the individual to seek for the best compromise. To attach small value to a

trend of opinion against the examinations in our school-life, and especially against the test of proficiency (*Reife-Prüfung*) which terminates the nine years' attendance at the secondary schools. By some it is held that a report made out by the teachers, who know their pupils sufficiently well, would serve quite the same purpose, and if one thinks of the interests of instruction, one also regrets that it cannot continue freely up to the end, but must to a great extent exhaust itself at the last in repetitions, and focus itself upon the desired positive results of the examination. But above all one sees that the young people must exert themselves very greatly in the time before the examination, and one feels unbounded sympathy with them, which is however characteristic of the period and of the general condition of nervous life. In reality the demand for a temporary, if laborious, condensation of what has been learnt in the course of the instruction is one which can hardly be dispensed with, and also one which strengthens the character. German critics forget that the examinations in our schools are easier than they are in general abroad. For, after all, with us the teachers who have themselves given the instruction, examine, and their report upon the previous industry, achievements, and general behavior of the candidate has its full weight, so that chance is almost totally eliminated; quite otherwise therefore than in the neighboring civilized countries, just as our examinations are not competitive either, and it is by no means only those who happen to be the best who pass them.

Similar protests to those against the examinations are often raised by the public, with whom the doctors too are quite inclined to agree, against tasks to be done at home, just as if these were not a necessary complement of the school lessons; while it is only in them that the pupil has seriously to rely upon himself, since in the class lessons he is carried along by the stream, and, working with far less concentration, is deceived as to his own mental acquirement. Moreover this demand contradicts that other which is also often raised at present, that some real claim should be made upon the independent activity of the young people. But of contradictory wishes

there is no lack in our world of culture. It is true one cannot but perceive that the imposition of definite tasks is insufficient for the proper drawing out of independent activity, and just for that reason there is at present a tendency (as has already been pointed out) to introduce more freedom of study into the higher classes of secondary schools, by which means the violent contrast which at present exists between the excessive freedom of the university and the excessive constraint of the school days, is to be softened down. The tendency to this kind of emancipation connects itself, in fact, with that toward an increased freedom of movement for the teachers, and greater liberty of organization for the schools, which was spoken of in the introductory remarks. Not only has the regulation of higher education long gone to much greater length in France than with us, but it is at present more complete in Austria also, where the official "instructions" or "directions" (*Instruktionen oder Weisungen*) extend much farther into details.

No one has ever failed to remark that the most important means of securing the right sort of school-life is the training of teachers. Nevertheless this has long been very lightly regarded in the case of our secondary schools. The view that purely scientific university education is the only essential thing has held its ground stubbornly, continually supported, it is true, by great authorities; even now indeed it is not quite overcome. Most of those who embrace the profession of secondary teachers in our country still do so more from interest in their special subject; only a minority do so out of a liking for the molding and educating of youth. And that is indeed one of the reasons why the true educational attitude is, as has been mentioned before, so often wanting in the profession. The relative indifference toward questions of method, which in spite of all the methodistical pondering often enough exists in our country, has the same explanation. For those foreigners are quite right who (as, for instance, James E. Russell) declare in their visits to German schools they have met with many very indifferent teachers and who are in consequence disappointed, because they brought too favorable a prejudice with them. It is indeed very

dangerous for a nation to be in unduly good repute in a certain direction, but it is indeed always the case that the peoples see each other as too black or too white. In that they are like children, for whom there exists only good and bad men. Nevertheless for some fifteen years now very much greater attention has been paid to the training of teachers, and especially to that of teachers in secondary schools. At the same time the voices which demand the combination of the academic with the practical professional training have nevertheless remained greatly in the minority, and although the regulation varies in many respects in the different German states, yet on the whole it still remains a principle only to give opportunity or encouragement to an introduction to the theoretical problems of pedagogics during the time of study at the university, and to leave all the more detailed and technical questions for the period of practical training which follows the secondary teachers' examination (*Oberlehrerprüfung*). There does not seem any prospect that this course will be abandoned in the near future. On the other hand it must nevertheless be recognized that pedagogics are beginning to obtain a somewhat wider development at the universities, than they long had. Regular (*ordentliche*) professorships in the subjects have indeed as yet only been founded in Germany in quite isolated instances, and in general it is treated only as a branch of philosophy. The philosophical faculties are still struggling against the granting of further rights, and the relation will only change slowly, much as the numerous foreigners who visit us may wonder thereat. Nevertheless the change will be accomplished in connection with the need of the time for a fuller understanding of the development of childhood and youth, and from this fuller theoretical understanding there will follow a more serious treatment of a number of practical pedagogic problems which were hardly recognized as such, or were decided according to subjective feeling.

This domain of child-study, in which Germany, although it gave the first impetus, has yet only hesitatingly followed other countries (especially America), has the valuable indirect result of bringing together and uniting the teachers of the lower and

higher schools. A relation of mutual estrangement between the two must be admitted as a regrettable fact. The consciousness of a keener truly pedagogic interest in the one, and that of real scientific culture in the other, has hindered their mutual esteem. And, indeed, the elementary-school teachers have themselves more and more come to feel that the training they have obtained in the training-colleges is unsatisfactory, unsatisfactory in that it consists too much in the mere imparting of cut and dried knowledge, stimulates too little to independent research, and does not give sufficient insight into the problems of science. Their well-justified wishes are accordingly being more and more given effect to by means of reform of the training-college instruction. There is indeed scarcely any inclination on the part of the authorities with whom the decision lies, straightway to make them pass through the university; practical points of view are to be considered in the matter. The relation of the elementary to the secondary schools is not at present advancing, either, in the direction of that arrangement which is more especially desired by the former, and which is also wished for by many theoretical students of educational organization. Social-political, or perhaps more properly social-ethical, arguments may easily be adduced in favor of the arrangement that all the children of the nation should have to pass in common through the primary school, that the separation should only occur after a number of years, and that so far as possible only difference of ability should be considered in connection with this separation. But nevertheless definite, and not merely external considerations are opposed to it, and easily as such a thing may be realized in a country of new civilization, so fundamental a change of system would only be brought about in our circumstances with the greatest difficulty. But it is impossible to try to demonstrate this in more detail here.

In connection with this may also be mentioned a difference of some importance between Germany and other countries. It often causes surprise that the institution of kindergartens, which yet owe their origin to the German Fröbel, is much less general with us than elsewhere. Can this be indifference toward this

education which precedes the ordinary schools? Such an explanation would be by no means inconceivable, for in a country of long-established schools such as Germany, people are perhaps too much inclined to attach importance only to the regular schools. But other and better grounds can also be urged against the extensive use of kindergartens. The number of families who reject the trouble of the earliest education of their children and leave it to strange hands ought not to be greater than is rendered necessary by the social conditions. And the whole organization of games or of easy playlike learning during this period of life is by many regarded as of doubtful value, because restrictive of quiet self-development. But this is not the place to follow up this question either. We must also give up entirely the description of the great field of technical schools preparing for a particular profession (commercial, agricultural, building-trade's schools, etc.). It may be said, in brief, that their development is advancing, even if somewhat irregularly. More important, probably, than these is the "continuation" teaching to be taken on completion of the elementary-school course, by young people intending to become artisans, and for the children of the working-classes in general. In this connection it is to be remarked that this teaching for which opportunities were for a long time given without its being in the least compulsory, is now gradually being made obligatory; some of the smaller states and large towns of Germany have begun, and it will soon become general. Will this perhaps be regarded as a further step in the direction of an undesirable public guardianship, and subjection of free individuality? We wish for the arrangement in the interest of the still immature youths themselves, and in the face of easily comprehensible opposition on the part of all those who would like to make full use at once of their young powers of work, masters, employers, and uneducated fathers. At the same time the question as to the subject-matter of this "continuation" is no self-evident one, and recently quite new and valuable proposals have been made upon the subject by one of the principal educators in the town of Munich, Dr. Krichensteiner. The proposals fully deserve to become more widely known; and the

same gentleman is subjecting the subject-matter of the instruction in the national schools (*Volkschulen*) to an interesting reconstruction, with a tendency away from book-learning and toward immediate observation, accompanying activity, and individual understanding and judgment. These are aims which, especially to American readers of this paper, will seem neither strange nor unsympathetic.

And the same is certainly true of another province, which very decidedly belongs to education as a whole, even if scarcely any space or trouble was devoted to it until recently: I mean education, or aid in the education, of all who are pathologically afflicted, the feeble-minded, the neglected, those of stunted development, and those exposed to moral dangers, as well as those who have not the use of all their senses. The education of the latter indeed, the deaf and the dumb and the blind, has been cared for for a longer time, and need only be made more complete. But now a system of "auxiliary" schools (*Hilfs-schulen*) and classes for the more or less feeble-minded is spreading itself over the country, and teachers of the best kind are devoting themselves to this task. The education of the children of morally depraved parents is provided for, in accordance with a law of the state, by lodging them with respectable families, and a great number of noble-minded men are aiding in this work; for the little ones there are "homes" (*Kinderhorte*), for those unfortunates who need strengthening there are "holiday colonies" (*Ferienkolonien*) and here and there also a "forest school" (*Waldschule*) instead of the town school, for the whole summer. The appointment of school physicians has become more and more general. There is much good will at work—whether more or less in Germany than elsewhere we will not attempt to determine. Towns, municipalities, the state, charitable societies, teachers, and educators share the tasks, which, altogether, are indeed endless, and which are continually increasing with the present development of social conditions. What field could be more inexhaustible than the problems connected with the education of the youth of a whole nation? Who will venture to say which nation does its duty most will-

ingly, or which, in spite of good intentions is left behind? We Germans have often received too much praise, and that easily changes into the opposite. To observe and compare is better than to praise and blame. In what I have said above I have tried to sketch a picture, the picture of our educational life such as it appears to me. He who sees more truly may correct me.

GREEK OR LATIN FOR ADMISSION TO COLLEGE

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Many defenders of the time-honored system of requirements for admission to college, which gave first place to Latin and Greek, have seen the passing of that system with regret. But the regret has been gradually tempered by the warrant of experience, and there are few who would wish now to return to the uncompromising demands of the old education. The consensus of educated opinion recognizes the wisdom of denying disproportionate emphasis to subjects, however noble in themselves, which would take the time that of right should be devoted to subjects essential to the understanding of the needs and movements of the new age. We demand that education shall elevate and refine life; on the other hand life itself demands that this shall mean in part a practical adjustment to environment. Education and life should act reciprocally upon one another. A democratic society fosters diverse interests and looks for enlarging opportunities for all the people. The people are quick to announce their wishes; the school as a democratic institution responds with reasonable celerity. The response is, in some cases, too generous and the result is that often there is encroachment upon the supreme function of the school, which is not to cultivate in undue proportion subjects which look to livelihood, but rather to prepare for intelligent citizenship and appreciative living. The growing freedom in the public-school curriculum has been held in check somewhat by the specific demands of the colleges as to admission requirements. For the public school is also a college preparatory school, and circumstances are making it, for all practical purposes, the only preparatory school in many of the states. As such it already controls the situation. Its object as a preparatory school rightly is kept subordinate to its functions as a finishing school, for such it is for a large

majority of its patrons. Hence, it in its turn has made certain demands upon the college in regard to subjects for admission, and the college has yielded one point after another, until now there are liberal options in admission language, history, and science, together with a reasonable number of elective possibilities.

Meanwhile conditions have been at work to equalize values and distribute emphasis in college courses of study. The conditions that have contributed most to this result have had their origin from the introduction of many new subjects into the curriculum, particularly scientific and economic subjects, and the consequent rapid expansion of the elective principle. Room had to be made for the new subjects. Their values were perfectly clear, but there was no court of arbitration to decide between certain established claims and the new values; and if there had been, no satisfactory results could have been attained. Comparison of values between the old and the new subjects became odious and aroused ill-feeling in otherwise harmonious faculties. Besides, the rights of individuals and the claims of society external to the schools had a fundamental bearing on the subject and demanded recognition. Out of these conflicting claims and interests grew and prospered the elective principle. The principle is fundamental to education under the present conditions, and in some form or other, is sure to be permanent. The only doubtful question about it relates to the degree of election that may be allowed without impairing the integrity of a liberal-culture course of study.

One of the incidental results of the enlargement of the curriculum in school and college has been the gradual absorption of all the baccalaureate degrees by the one degree of Bachelor of Arts. This result is, under the conditions, inevitable, and there is a widespread acquiescence in it. At the session of the North Central Association of Colleges and Secondary Schools, held more than three years ago, a committee composed of Presidents Angell, Northrop, Baker, and Thwing presented a report concluded as follows: "It seems proper to let the requirements of the degree of A.B. indicate the completion of any undergraduate course, thorough and sufficiently prolonged, in a college or

university of reputable standing. Such a usage bids fair to become pretty general in this country, and, we think with good reason."

It is no part of the present purpose to discuss the movements which have resulted in the educational conditions referred to. The conditions exist. Without doubt they will continue to exist in some form or other. For these reasons they justify the question proposed in this paper, namely: If a college gives the degree of A.B. for all courses and in its admission requirements allows options and approves the elective principle, should not Greek have the same admission value as Latin?

At present Greek is at a distinct disadvantage. In the growing tendency toward freedom and elasticity in requirements and college courses, Latin has held its traditional place with remarkable consistency. There were good reasons for the persistency of Latin in the earlier period and there is cause for satisfaction in the result. For it has contributed much to definiteness and stability in secondary education in a period of experiment and transition. When modern languages became by general consent accredited as suitable subjects for secondary education, there was a tendency with which no fault can be found to displace one ancient language, in case two had been given, for a modern language. The displaced language was Greek, practically without exception. The result is that in secondary schools, of which the public high schools now constitute the largest number, Latin and a modern language comprise the language opportunity in the majority of cases. There is no essential reason why this combination should receive particular emphasis. Moreover, the languages of the preparatory period are contained in the college period, which is pedagogically reasonable, and no adequate opportunity or suggestion is presented to a student which leads him to think of a second ancient language. There are probabilities that he will take another modern language before he finishes his course. Three languages are usually sufficient as a language equipment for liberal-culture purposes in present conditions, and there is no fault to be found so far with the conditions. The fault is with the mechanical and set condition which emphasizes Latin to the neglect of Greek; or rather

practically requires Latin and excludes Greek. There is no such lack of balance between German and French; and there is no sufficient reason why it should continue to exist between Greek and Latin.

Latin has its place by virtue of inheritance, and conditions have contributed to its maintenance which no longer, in view of the present state of education, have validity. The Latin language has had a primacy in the educational systems because it was the language of the conquering Roman race. The Roman people were a world people; consequently their language became a world language. It has an integral, historical relationship to the English language. It has a highly developed grammar, and a structure of wonderful mechanical completeness. It furnishes a superb *corpus* for linguistic dissection. It has been the language of scholarship and diplomacy. There are reasons enough here stated to give it a place and hold it secure in that place for two thousand years. In the old education by the side of Greek its position was unassailable; in the new education with its free election and the Arts degree for all courses, the question is a pertinent one whether Latin is to have a perpetual title to its position of pre-eminence among college requirements, and in the secondary curriculum. If it is to be so, Greek will gradually be eliminated from the college courses of a vast majority of students. The question is not whether a student shall have Latin and Greek but, if he is to have but *one* ancient language, whether he may not freely choose between the two.

Few colleges emphasize Greek in such a way as to put it on an equality with Latin for admission purposes. Among the few is Harvard University. A few emphasize it as compared with modern languages. Johns Hopkins is a type of this class. The majority require Latin absolutely and make Greek optional without any special emphasis upon it. The situation requires that Greek be made optional with Latin on terms that will give Greek an equal chance. An immature student who "takes the course" without intelligent discrimination has a right to a suggestion regarding the value of Greek, and there are many facts in addition to the individual one to justify the suggestion. As

soon as the consideration of Latin as an admission subject is shifted from the linguistic point of view, it loses its special eminence in secondary education. Special stress on that element in education is not demanded by modern conditions; and if it were, Greek could easily meet the demand. Structurally it is an easier language than Latin. It does not have the same degree of systematized structural detail, but it does have a structure that is natural and spontaneous. The Greek order is a normal order. It expresses with utmost force and lucidity the thought of the writer. What is more important, it has a message to give of deepest significance. It has a kinship of the closest kind with the thought and literature of the modern world; and hence is not alien and ancient when considered in relation to the real demands of true culture. From Roman times to the present it has been used as a norm of literary excellence which gives it great value as a subject for linguistic study. But there is no reason for pressing this point. It has a more valid claim for consideration as a preparatory subject on other grounds which more nearly harmonize with the spirit and needs of the times.

It is for the Indo-European branch of the human family practically the original language. It is the language in which the great literary types were created and in which to this day they remain as standards of measurement. This is true for epic, lyric, and dramatic poetry and for philosophical and historical prose. An original creation is always an interesting and profitable object of study. An original creation that lays hold upon the universal has an undeniable right in the realm of education. Beginning with Homer, Greek gives universal types true for the race; it gives the unsophisticated original man as he acts in war and peace. It is less a literary document than a human document—a voyage of discovery into the realm of human life. Pedagogically there are the soundest reasons why preparatory subjects should touch upon fundamentals and get face to face with things as they really are. The Greek affords this opportunity in a unique way, both in the epic and in the other branches of literature which correspond in grade of difficulty to Caesar, Vergil, and Livy; and they are within the reach of students who aim

merely at an elementary knowledge of the language. The simplest of the Platonic writings, those first read in the schools, introduce the student to the most fundamental questions of life and duty, not merely abstractly but concretely, in relation to the man Socrates. Tragedy also deals with the essential problems and those of universal scope—those of divine and human law and destiny. Every department of the literature likely to be touched by the student deals with universal and permanent values and brings him, if the teacher is reasonably efficient, into direct contact with the vital issues of life.

More specifically the striving of the Greek for ultimate reality developed a true method of scientific and philosophical thinking. It discovered to the world and defined the social and personal virtues, and it recognized in these virtues, not opinions, the inventions of men, but expressions of eternal tendencies in the realm of law. Courage, temperance, obedience, justice, truth, service—all have a place and a justification in the Greek writings, and little has been added metaphysically to their findings from that day to this. Lotze says: "The thought of seeking out the very grounds and bases of our judgment of things and combining them constructively, in a system of truths—the foundation in fact of science—will forever remain the glory of the Greeks." From Homer to Aristotle this striving and attainment of which Lotze speaks is recorded on the Greek scrolls under different guises in the different departments. It is more than a pedagogical question—it is a public, a life question, how our abnormally active generation may be given a reasonably fair chance to come in contact with the Greek point of view.

Greek literature reveals an extraordinary grasp of the elements of our experience. This is simply another phase of the search for reality. We need to read Greek to study ourselves. The study of history is, or should be, psychological rather than a study of events. It should be primarily a study of the evolution of the controlling peoples of the world in their inner life, in their civilization rather than in their activities. The activity after all is but a token, a symbol of the real life. The Greeks compass the race—the German claims him as German, the

Englishman as English, the American as American; and he is claimed alike by imperialist and democrat. Other peoples achieved more externally than the Greeks; none has embodied in its literature so rich and varied an experience. In them therefore we study history as related to human experience. From this point of view, they mean more to the world than any other people. The rights of the individual are set forth first by the Greeks, and the outcome of the discussion was a rational set of principles relating to man as a citizen in a free society. The rights of the individual and the rights of the state, both have sane and judicial interpretation in such a way as to have direct bearing upon modern and universal theory and practice in law and government.

The characteristics which have been referred to as appearing in Greek literature all find their consummation in the central thought of Greek life. The central thought is the striving for a higher reality which is known as the ideal. The people which seeks for reality will not stop with attainable reality. They will insist on keeping in view an unattained even an unattainable ideal. This is the only genuine reality. The prevailing trend of Greek activity in politics; in literature in its various departments; in art, whether it is the art of coins, of gravestones, or its highest expression in the handiwork of the master artists, has been upward toward an ideal. This is the secret of the permanent value of the Greek contribution to the world; and this is the final and all-inclusive reason why Greek deserves a chance in modern preparatory education.

The Greek is a dominant element today in the realm of pure thinking and has a lesson to teach that is sorely needed in our common life, in the haste and selfishness and commercialism of the day. Utilitarianism is active in all movements. There must be an antidote for it in education. There must be a point of departure for emphasis of the reality of the ideal. No literature nor people affords this opportunity so positively and so consistently as the Greek. Their ideal is for the race. "Greece is not a country, a geographical expression; but a mode of feeling, a certain direction of the human spirit. To live for any time in

the companionship of the poets and thinkers of Greece ought to be a preservation against all intellectual narrowness or contracted sympathies, an escape from the confining atmosphere of sects and parties." The primary emphasis on Greek is not that it acquaints with an ancient people and an original and perfect language. It is that it has a spirit and an ideal that are alive and necessary for the present and the future. Above all things the American youth needs a genuine ideal and an elevation of soul toward it. He needs life more than the things of life. Our youth need what the Greek has to give; and the nation needs it. The recognition of this fact by those who control secondary schools will give to society that choice remnant of educated men, now in danger of being lost, who will be able to understand and interpret Greek thought in terms of modern experience. It is of the highest importance to the human race that this work shall be done.

The question may be asked whether a youth with three or four years of Greek to his credit will have an appreciation of the values referred to in this paper. Of course, not always; but even so there will be no loss to the student, for the language training will be fully comparable with that given by Latin. But such a question is not wholly relevant. The results that accrue to the student in any case are dependent upon his own capacity for work and understanding, together with the ability of the teacher to instruct. It is a question that has to do with method and detail chiefly, and so far as it implies an objection, might be urged with reference to many other subjects. The specific value of a subject is the question of primary importance in preparatory education; other questions are secondary. If the subject has anything fundamental in it, anything of universal application, it will still have much to contribute after the pupil has exhausted himself upon it. That which is beyond the immediate reach of the understanding is after all the element which determines the essential value of a subject as a means of education.

It is a common but unwarranted opinion that Greek is too strange and remote from normal conditions of youthful experi-

ence to be profitable for study as a first foreign language. The same objection might be urged against Latin. In fact the language structure of Greek is quite natural and normal from the English point of view. It has a large body of literature of the highest type suited for elementary use. It teaches, as we have seen, human nature and universal experience; sets forth ideals that men need; and introduces to the creative atmosphere of the Indo-European branch of the human family. Greek has these things to contribute without undue bestowment of toil on the part of the student—no greater certainly than a student of average ability is reasonably expected to give. In this respect Latin would have little, if any, advantage over Greek. If there is any weight in the suggestion that Greek is too difficult, it enforces the contention of the advocates of modern language that German or French should be studied before an ancient language.

There are good psychological and pedagogical grounds for offering a modern before an ancient language. French or German may be studied in a way to appeal strongly to youthful experience, and there is an attractiveness about them as living things with practical uses which Greek or Latin cannot have. It is true that "no language is dead in which anything living has been written," but the average schoolboy or girl, unless the conditions are extraordinary, is not able to comprehend at once the significance of this truth. The youthful imagination pictures an active life, one to be apprehended by the senses. That which must be translated into terms of his own interest and experience by intellectual effort does not make an immediate appeal. The ability to do this is a noble and a necessary part of education, but one of gradual attainment, and better suited to a mind with some training rather than to one struggling for the first time with the elements of a foreign language. There are those who believe that there should be a reversal of the present order, that a modern language should be chronologically first in the curriculum, to be followed by Greek or Latin, a free and workable option to be permitted between them. Traditions would withhold consent to such a readjustment, but no well-grounded pedagogical reason would stand in the way. There are, of course,

good reasons to be urged against such an arrangement, but modern educational method is evolving less under the influence of these reasons than under that of existing active influences. It is the duty of educators to study these influences with a view of directing them wisely. If the reversal of the present order were to give a free opportunity to Greek and secure for it a recognition that it cannot now have, there would be ample justification for it. There is much to be said against such a conclusion, but the question surely is worthy of some consideration.

SCIENTIFIC BASIS OF HIGH-SCHOOL METHODS¹

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The fundamental thesis of this paper is that, subject to certain modifications, the methods used by the outside world in acquiring knowledge or in solving problems are the best prototypes for the methods of the school.

All modern scientific endeavor whether in the natural or the human sciences is governed by two axiomatic principles, namely, (1) Make sure of your facts; (2) Convince yourself of the correctness of their interpretation. In both these respects the school needs to learn of the world.

Facts are acquired in two ways, either at second-hand through authority, or at first-hand through direct observation or observation aided by experiment. Bacon complained of his age that it was indifferent about making sure of its facts, being prone to accept them upon authority. The result was that the progress of knowledge was arrested, for nobody cared to verify alleged facts or to find out new ones. This resulted in endless processes of perfectly correct reasonings upon premises which had never been verified and hence might be false. Evidently such a state of mind could not lead to progress in real knowledge, for even the so-called final causes upon which the Middle Ages prided themselves were, as Bacon said, like vestal virgins, worthy of reverence, but unfruitful. Needless, perhaps, to say, Bacon's complaint was heeded, first in natural science and later in all science, until at present it has become almost instinctive for men to make sure of their facts before venturing to deduce conclusions from them.

At this point we need to make one of the modifications mentioned. In the outside world men always have to make sure of

¹ Read before Section L of the American Association for the Advancement of Science at the Chicago meeting, December 29-31, 1907.

the facts when they are at the frontier of race knowledge, for nobody knows what the facts are, hence nobody is able to transmit them by authority. But in the school it is different. The student is at the frontiers of his own knowledge, not at those of race knowledge, hence though he does not know the facts somebody does, namely the teacher or the author of his textbook, and is consequently able to impart them correctly by authority. Here is the cause for many a shipwreck in secondary teaching. It is so infinitely easier for teacher or text to *tell* the student the facts than it is to make him search them out for himself or verify them, that authority is made almost the only source of acquisition. If teaching is to be revivified by adopting the spirit of scientific investigation, Bacon's prescription respecting the acceptance of authority for truth must be accepted, but for a different reason. The teacher may say, "There is no question as to the correctness of these facts or these principles which I propose to impart by authority, for they have been sufficiently verified by scientific investigation. Do you presume to question the correctness of the law of gravitation, or the laws of motion, or that the earth revolves about the sun, rather than the sun about the earth as they thought in Bacon's time? Why can I not impart them by authority since their truth can not be questioned? Bacon's objection appears not to hold for the school." But, it must be urged in response, Bacon's reason for objecting to authority as the criterion of truth was its effect upon science; ours is its effect upon the student. His was objective and related to the progress of science; ours is psychological and personal and related to the progress of the student. The effect of such a procedure is as bad upon the mind as it is upon science, for it results either in a spirit of dogmatism or of mental servility or both, while it hinders apprehension, overburdens memory, and tends to make knowledge inert or unproductive, to replace vividness and vigor by placidity and indifference.

A second important difference between the investigator and the student is that the latter must devote most of his energies to acquiring an epitome of race knowledge which the former has already mastered. For this reason the student cannot recapitu-

late even in outline all the processes that were involved in the first mastery. One youth cannot hope to pull on even terms against the efforts of thousands of men. How then can instruction cover the requisite ground and at the same time insure a scientific attitude of mind? The answer to this question is that both quantity of subject-matter and quality of thought-processes can be attained only by selecting for scientific treatment the important nuclei, or thought-nodes, in every subject. Here come in the categories of a scientific method, such as first-hand acquisition of facts by observation, or observation and experiment, the use of hypothesis and analogy in forecasting the probable explanation of the facts, the application of scientific rules of evidence for the determination of causes and effects, and the final verification of generalizations by the test of application to new cases. A study thus treated is attacked at its strategic points, and the whole thus quickly mastered in detail. All its subordinate parts find their natural places and may be rapidly acquired by less rigorous methods. The giving of facts and even of subordinate principles by authority may be in place, for they are now but corollaries of the main propositions.

It is not unnatural that admirers of the inductive sciences should place much emphasis upon teaching every subject by strict inductive methods or, on the other hand, that those who feel impelled to make short-cut deductive approaches the chief recourse for gaining time, should lay great stress upon verification of principles that are given and accepted as unquestionably true. Each tries in his way to satisfy the demands of his conscience for scientific procedure. But each of these extremes leads to undesirable results, for in the first case the student is often urged to prove by long inductive research a proposition that he already knows to be true, not indeed at first-hand, but by the dictum of those whom he trusts, while in the second case he is asked to verify that which he already knows in the same way to be correct. "What's the use," he exclaims, "of trying to prove either way propositions of which I am absolutely sure?" His work becomes perfunctory, observations are interpreted, not for what they actually reveal, but according to results that are

expected. Thus the scientific spirit is paralyzed in the house of its friends. Where then must the emphasis be laid, if not on induction or verification? The difficult and important thing in this stage of scientific teaching is, not the drawing of conclusions from supposed facts, or judging when a principle is verified, but the making of reliable observations with or without experiments, and an interpretation of them which is so far as possible unbiased by preconceptions. Strictly inductive processes are most effective when the student does not know, or at least is not certain, what is to be proved, for then he is, even if in miniature, the real investigator; while verification in the case of principles accepted on authority should be made, not so much to prove the principle as to use it to explain phenomena not hitherto comprehended. Verification so applied becomes a means of acquiring new knowledge. Correct and adequately interpreted observation is, therefore, the antecedent condition both of induction and of verification, and should be the school process most carefully developed.

It is when we come to the explanation of facts that scientific method makes its largest contribution to the methods of the school, for here thinking is the necessary condition of progress. The man who holds with the emotionalist that thinking is a disease cannot be an investigator, since phenomena cannot be explained, that is to say, causes cannot be discovered, classifications determined, or principles established, without active thought. It is quite possible, however, to seem to make progress in school with little or no live thinking, for the student can always memorize the facts and principles given by teacher or text. No real teacher need be told that such an attitude of mind is detrimental, if not fatal, to development. How effect by invention or device the ends we seek? How classify allied phenomena of the mineral, plant, and animal world? What is the function of this organ or part? Everywhere we meet the same state of things—to explain is to solve a problem. Outside the school every challenge to explanation comes in the form of some problem to be solved, whether it be to explain a natural

event, to decipher a hieroglyphic writing, or to restore the lost inscription on the Parthenon, which has left no key except the nail holes in the stones by means of which the letters are fastened on. If we ask why explanation in the outside world generates the problem, the answer is that it is the necessary intermediate stage between the unknown and the known. There is no other way of bridging this chasm when we are confronted by real situations, for authority is impotent here.

Whether school work shall fall into the problem form or not, depends upon whether explanation is to be made by the student's own thinking, or whether the teacher or the text shall do his thinking for him. That students shall truly think, not merely think that they think, must be held to be axiomatic by every thinking teacher.

Problems in the school, like those in the outside world, are both large and small. The major problems may take the strong persistent pull of days or weeks for their full and complete solution, while the minor ones, on the other hand, bring about kaleidoscopic interchange of question and answer, mental alertness arising from flashing insights into ground and consequence, instantaneous positing, accepting, or rejecting or modifying hypotheses—all of which are manifested in those forms of instruction that develop mind most rapidly and effectively. Here again the methods of science furnish us the most useful prototypes for the processes of instruction.

Again, just as it is vain effort for inventors of teaching devices to try to produce a full orchestral effect by playing on one string, so it is unwise to limit all thinking exercise to one form, say to that of *generalization*, even if this be used as a blanket term. Science again becomes our best guide, for her problems relate to the determination of facts as such by observation and experiment; then they relate to cause and effect in every realm of truth, to definition, to classification, to hypothesis, theory, rule, principle, law, formula, or what not, and she uses freely both induction and deduction, either simultaneously or in succession, and she employs with equal freedom all forms of analysis and synthesis. The methods of life are the macrocosm

of which those of the school are the microcosm, mirroring in their small way all the great processes outside.

A final difference between the investigator and the student pertains to the different methods by which they become efficient in the use of knowledge. The former attains efficiency in the use of his results partly through the concentration of his effort, and partly because they become a part of objective science to be used by all the world as occasion serves. A man who has spent years upon an invention knows how to utilize it when it is perfected; one who like Darwin devotes a lifetime to the establishment of principles such as those that control development, needs no specific exercise to train him to use the laws he has discovered. It is otherwise with the student, however, because in the nature of the case no great concentration is possible with him. Where the original investigator of a law, say of physics, spent weeks or years in its discovery, the student can devote but hours or at most days to its recapitulation. The amount of ground to be covered and the brevity of the time allowed compel the student to find efficiency in new ways if he is to become efficient at all. These new ways are necessary, even should they seem somewhat artificial to the worker in real science. As is well known, the student becomes efficient in the use of his knowledge to the extent to which he applies it in the explanation of phenomena kindred to those which give rise to it. In this way, as Dewey says, the content of knowledge which to the student is an individual acquisition, acquires the form of efficiency in the social world outside. Though the detail of the school is somewhat unlike that of the outside world, the spirit is still the same, for it would verify and perpetuate knowledge by making it a positive, a lasting force in society.

What then must we do to secure the substance of that whose phantom so many of us pursue? The answer is, read and digest the works of Mill, Bain, Jevons, Pearson, and Mach, and apply in the school the insight they give into the methods of the world of thought.

THE RELATION OF THE HIGH-SCHOOL COURSE TO THE STUDENT'S LIFE PROBLEMS

H. B. WILSON
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Man's all-inclusive, earthly ideal is that he may live a successful life. Whatever he may do or say in his gayer hours, and in whatever life calling he may be engaged, this is the ideal of his serious, sober, and more fundamental self. How much organic insight has he to guide him and to stimulate him in the realization of his vaguely defined goal? How adequate is his knowledge of the factors in general, which are operative in successful living and in worth-while self-realization? These are typical of the questions which occur to one as he observes the high-school or college graduate begin his "groping," as one beholds him coming to realize vaguely his earthly qualities and his human limitations, and as one sees him striving to discover an object for attainment worthy of his talents.

Self-realization, in so far as it is attainable in man's finite state, and, therefore, successful living, is the result of a proper sequence of experiences, choices, and acts extending from infancy throughout life. Some of these experiences, choices, and acts are more far-reaching in their consequences and more determinative in their character than are others. Therefore, if errors and mistakes can be avoided in these more consequential matters, he who sails his bark o'er life's perilous sea may reasonably expect to approximate the living of a successful life throughout each of the successive stages of his existence and to merit upon the completion of his earthly career the plaudit, "Well done." Such a training and disciplining of himself as will insure the proper and effective prolongation of his youth, the wise discovery of a life occupation, the right choice of a life companion, and the early discovery and acceptance

of that religion which shall be to him soul-satisfying and life-giving are undoubtedly among the few dominating, if indeed they are not the dominating, concerns of each life.

Observing the "groping" of the graduates of our high schools and repeatedly discovering very keenly my inability to offer any very satisfactory or helpful suggestions (either to myself or to the inquiring youths) to aid them in their quest, the writer started the inquiry in his mind about three years ago as to whether the public schools were doing all that they might legitimately do to equip their students by the date of graduation with a sufficient basis for the adequate and proper solution of the weightier matters upon which the attainments of a lifetime hang. A careful pursuance of the inquiry soon revealed that there are at least two respects in which the schools may be of larger service to the student in the solution of some of his greater life problems. In the first place, the schools may plan to employ every opportunity that presents itself in connection with the regular school courses to show the relation of the work in hand to the solution of the far-reaching problems in practical life. Of the great and important work that may be done in this connection, I shall not speak at this time, except to hint that one result following from the courses in nature-study and agriculture in the schools should be a knowledge, on the part of our students, of the interests and equipment which must be possessed by the successful farmer. Through history and current social studies, the students should become familiar with the type of men who have attained success in literature, art, invention, business, and statesmanship. The courses in science should afford a telescopic view of the equipment needed in mathematics, chemistry, physics, etc., by those who would successfully prosecute such scientific pursuits as engineering.

The second respect in which the school may render effective service to its output is through the organization and presentation of a course of work which has for its special object the treatment of the more fundamental life problems together with the basic facts and principles underlying their solution. It is to set forth the course of work which I have been developing dur-

ing the last three years with the senior classes of the high school¹ under my supervision that this article is written. The work began under the plan of meeting the seniors during one regular recitation period every Monday afternoon of the last term (eighteen weeks) that the seniors were in high school. The organization of the course and the topics considered have gradually evolved in the light of experience. The discussion will concern itself with the present scope and purposes of the course, rather than with its growth into its present status.

The aim in the course is to lead the students to a discovery of some of the principles underlying the living of a successful life. The view has been urged that one's best energy should at all times be spent in *living a life*, rather than in *making a living*. It is quite generally conceded, I take it, that there are entirely too many *farming men* and not enough *men farming*, that there are many *preaching men* while there are but few *men preaching*, etc. The difference is a wide one—in the first case, the job runs the man, while in the second case, the man runs the job. In the doing of any piece of work, the largest return should be to the inner man, while the external, financial return should be simply incidental.

This large aim, pursued with the attitude suggested, has resulted in a course of work organized in broad outlines as elaborated below. Attention is directed (1) to the complexity of modern society; (2) to the great contrast between primitive and modern society, bringing out that whereas each man under primitive conditions was his own keeper, under modern conditions each man is kept by his brethren and is in turn the keeper of his brethren, and that whereas great independence prevailed in primitive life, the greatest dependence prevails in modern life; (3) to the steps by which the various institutions of society became differentiated; (4) to society's growth in complexity between the institutions as well as within each institution, and (5) to the strenuous character of the life that is lived under modern conditions. Following this, modern life is investigated with a view to determining the great and

¹ The Public High School, Franklin, Indiana.

manifold work that is awaiting laborers and to discovering the opportunities for service and for fame which are presenting themselves to our youth who can discern them. In the light of the work to be done, the qualifications of the socially efficient worker in the matter of physical basis, education, character, and ideals have been developed.

The second section of the course turns from the social situation to the individual as such, with a view to determining the laws of his being in harmony with which he must proceed in his effort to become an effective factor out in society. Then the idealized, socially equipped and developed being is carried back into the social situation in an effort to see how his equipment and character are to be modified and molded by the work which he does for society in his chosen calling.

The third section of the course keeps in view the individual as he looks forward to and discovers the work he can do best for society and himself and the individual as he works for the social good, with a view to discovering certain guiding and stimulating facts and principles. Here the importance of a thorough perspective in the life calling chosen is emphasized in an effort to show that accurate forward steps in any field are impossible unless one knows the history of the field thoroughly. A knowledge of the types of people and of their common, general reactions is shown to be valuable in dealing effectively in all social relations. It is shown that one should not approach the question of a life occupation so much with the idea of *choosing* his life occupation as with the idea of *discovering* the calling in light of a general knowledge of the fields open and in need of laborers and in light of the interests and abilities found in himself, considered in connection with the known requirements for success in the fields under consideration. The far-reaching importance of keeping one's self at the highest possible level of efficiency and of expending one's best self in his life work and of husbanding one's energies to these ends is next considered. The relation of the matters considered in this last topic to the prolongation of one's youth both in body and in the educable attitude and ability of mind is carefully developed. Following

this discussion comes a careful and rather detailed investigation of the effects of heredity, environment, parental influence, and the life companion as factors determining one's attainments. The work closes with two companion studies, the first emphasizing causes of failure or hindrances to attainment in life and the second setting forth the different degrees or levels of attainment that are accomplishable in a life career.

The above course of work has been developed through lectures, reports by students upon topics assigned for study and investigation, round-table discussions, developmental lessons with certain topics, quizzes, and some textbook work. The underlying and organizing principles of the courses have been drawn from the fields of economics, social economy, ethics, hygiene, psychology, and pedagogy.

My sources of material for guidance, inspiration, and class use were as many and as varied as my education and training to date have lead me into. I can think of no field in which I have read or studied that has not made indispensable contributions. The difficult problem was to find sources to which to send the students. In dealing with some of the problems, it was not practicable to attempt to send them to any literature whatever. Their main sources were several standard texts on economics and political economy, special articles in the leading current magazines (*World's Work*, *Review of Reviews*, etc., were most used) and such books as Jordan's *Call of the Twentieth Century*, Jordan's *The Blood of the Nation*, Smiles's *Self Help*, Conwell's *Manhood's Morning*, Vanderlip's *Business and Education*, Hadley's *Baccalaureate Addresses*, Hyde's *The College Man*, Gulick's *Efficient Life*, Henderson's *Social Spirit in America*, Henderson's *Social Elements*, Bowker's *The Arts of Life*, Wingate's *What Shall Our Boys Do for a Living*, Lorimer's *Letters from a Self-Made Merchant to His Son*, Reich's *Success in Life*. Each class was required to purchase and read some book relating to the general field under study. The same book was not used by any two classes, but the following have been used: Marden's *Choosing a Career*, Fowler's *Starting in Life*, Warner's *The Young Woman in Modern Life*, McLeod's

A Young Man's Problems, Huling's *Letters of a Business Woman to Her Niece*, and Beveridge's *The Young Man and the World*. During the last term, two books were read and reported upon by the students, a portion of the students buying one book and an equal number buying the other book.

I think I have never had a more satisfying sense of attempting to do a piece of work of genuine importance and of lasting influence than I have had in presenting this course to my students. It has been the means of bringing me into direct heartfelt contact with the sober, serious side of my students both in class and in private conference. It has seemed to be the means of exposing the student at his best and on his highest level at all times.

At various times, I have called for criticisms in writing from the students upon the work we were doing. Two brief extracts below are typical of the attitude embodied in these criticisms. One says, "This course has given me a broader view of what may rightly be expected of me and of what is attainable in life. It has impressed me with the importance of making proper decisions in certain fundamental matters as soon after I reach maturity as possible. I have been led to see how I may investigate for myself the advantages and disadvantages of the various careers open to me. I feel that our discussions have been too largely regarding matters of concern to the boys and that more attention should be given to treating the problems so they will be of greater value to the girls."

Another says, "New lines of thought have been opened to me and much good advice as to the careers that are open and as to how to start in one has been imparted. It has been worth much to me to be impressed with the advantages and vice versa of different careers and with the fact that by careful preparation and foresight I can very largely determine my attainments in life. I feel that my high-school training would be incomplete without this course; it will be of much practical value to me in solving the problems that I shall meet immediately after graduation."

EDITORIAL NOTES

The old question "Can virtue be taught?" shows no signs of resting. Rather it is raised more and more insistently. *The California Prize Essays on Moral Training in the Public Schools* by Rugh, Stevenson, Starbuck, Cramer, and Myers, emphasize various aspects of the need of this training and of the methods for bringing it to bear. The Council of the Religious Education Association at its meeting in Cleveland, in connection with the National Education Association, devoted several sessions to the subject.

Certain things are clear by this time, or ought to be. No intelligent person will confuse moral education with instruction in morality. The agencies for moral education are found in the family, in the general order of the school and of society, in the standards of value which are shown in business and every other occupation, and finally in the literature and art which present in concrete form what men prize or condemn. No one can question that the school contributes its share of these agencies. A recent observer of American life who has been writing unusually thoughtful letters to the *London Times*, bears emphatic testimony to certain things which the schools accomplish. After seeing American family life this writer was at a loss to account for the good order and self-control which on the whole prevail in America. The mystery was solved for him when he visited the schools. There he found children fitting into a larger order, learning to submit to the demands of a larger institution and finding their places in a social organization which gave discipline and impressed authority. Undoubtedly our system does not always find a medium between too great laxity on the one hand and a too mechanical rigor where the size of the school seems to demand military discipline. But on the whole there is undoubtedly a valuable training constantly in progress; and the personal influence of the great majority of teachers—even though we should all be glad to see more men in the ranks—is a wholesome and in many cases an inspiring factor.

What we should like to know, however, is this: Is there any place for more direct study of morality? Granting that the intellectual is by no means the main stock of the moral life, has it any significance at all? As schoolmen we like to think that study and intellectual effort is of some use. Is the moral life an entire exception?

If we consider what the general features are in the moral life we readily distinguish some which are not to be supplied by any instruction. For example, we say that conduct is formation of good habits—of character. Now we know that habits of action are not formed by thought and discussion; they are formed by action. No classroom instruction, then, will ever form a child's character so far as

this implies actual doing. Or, again, we say conduct implies responsibility. This, too, is an attitude of character, a habit, a way of acting. It is brought out only by acting in response to requirements set by society or by the person himself. Once more conduct depends in part upon keen sensibilities, and upon a certain emotional ardor. Standards of right or wrong become ideals only as they appeal to the emotions. We win victories or master difficulties, or serve our fellows only as we take an interest in the thing to be done. This emotional quality, this interest, is stirred by some fine example in life or in literature. It is potent because of the charm of the person or of the contagious inspiration of the hero or the saint. We are steadied by our respect for the moral integrity or unflinching purpose which we confront. In a word, the habitual and emotional aspects of morality must be learned by doing, or suggested by what appeals to the feelings, rather than imparted by direct instruction.

But morality is not all habit and emotion. Conscientious conduct implies not only doing the right thing when we know it, but finding out the right thing to do. Conduct that is mere habit is not real moral conduct; "good habits" need constant revision for growing persons and changing society. Habits formed solely under the direction of other persons are very likely to break down if there is no reason in them from the standpoint of the person himself.

What, then, can be done to give the child a more personal and individual moral life which will rest upon some intelligent basis? It is easy to see some ways in which this cannot be done. No one with a sense of humor would wish to attempt to present in any formal fashion the various virtues. No one with genuine insight into child nature would wish to pattern moral instruction after those texts in physiology which in their zeal to inculcate temperance have too often made the name and the thing odious. If there is to be instruction in morality it must conform to scientific methods and intellectual conditions. Sentiment presented by the great artists is inspiring and effective. If attempted by the less capable it is commonplace and becomes sentimentality. The classroom instruction, if there is to be any, must follow a scientific method and not attempt the work either of actual life or of literature. What, then, is the part of science or knowledge in moral life?

First of all a scientific or intellectual study demands an effort to discover some general principles, to find reasons, to bring together what is fragmentary and detached, to see whether our standards of conduct are merely a matter of habit and sentiment or whether they can be justified. Now this involves analysis, and it may be said that the high school boy or girl does not need to be stimulated toward criticism and challenge of existing habits. It may be said also that the adolescent is critical enough of established conventions and order. To examine morality intellectually may seem to be pushing the wrong way. It is pre-

cisely because the adolescent is critical and disposed to challenge what he has been taught in earlier years that some study of the reasons for moral standards is indicated at this stage in his development. We must not flatter ourselves that our high-school boys and girls are content to take on trust everything that their elders believe, or to maintain unquestioned all the habits in which they have been trained. Our statistics of crime and our constant experience with boys and girls not criminals shows that this is the time, if ever, when they need to have some intellectual aid in their process of criticism and reconstruction. It is not a question whether boys and girls of the high school will be critical. The question rather is whether they can be aided to find positive values in what may too easily seem a mere matter of authority or tradition.

The second characteristic of scientific or intellectual treatment has already been suggested in the preceding paragraph. It is characteristic of science that it affords a method. It does not claim to decide offhand the problems presented; it rather gives a way in which its followers may go forward patiently and steadily. The very process of study with such a method inculcates sobriety and responsibility in judgment. We recognize the value of this method in other departments of modern life. Is it not to be expected that if this method were applied properly to the study of moral problems it would be a steady force at just the period when the boy or girl needs a new method? The personal control which was so effective during earlier years is now liable to be less welcome. If a control by rational principle and method can be gradually brought to have a place, the difficult period of transition to manhood and womanhood may be for many—especially of the more independent sort—rendered much easier.

At a later time we shall present some suggestions as to what subject-matter may be studied as a basis for moral instruction.

BOOK REVIEWS

"Pioneers in Education." A series of six volumes by GABRIEL COMPAYRÉ, including *Rousseau*, *Herbert Spencer*, *Montaigne*, *Pestalozzi*, *Herbart*, and *Horace Mann*. New York: Thomas Y. Crowell & Son, 1907. \$0.90 per volume.

In a series of monographs, entitled "Pioneers in Education," M. Gabriel Compayré has added six thoughtful and interesting volumes to the body of literature in the history of education.

The preface to the volume on *Rousseau*, which serves to introduce the series, states the various aims of the author. He desires not only "to represent the men who deserve to have their names on the honor list in the history of education, . . . to represent them as they lived; to show what they thought and did; and to exhibit their doctrines and methods, and their moral character," but he purposes likewise to "sketch (the) background, the general tendencies of the epoch in which the reformer lived, the scholastic institutions of his country, and the genius . . . of his race. . . ." Finally, the author attempts "to bring face to face ideas held long ago with modern opinions, with the deeds and aspirations of society today, and thus to prepare the way for a solution of the pedagogical problems of the twentieth century." This would seem to be a sufficiently comprehensive purpose for any historian of education, and one which, on the whole, M. Compayré has adequately achieved.

In each of the six volumes approximately the same plan of development has been followed. A brief introduction to the educator under discussion is followed by a more or less complete description of his life and a critical study of his theory. A final chapter is devoted to a helpful summary of the educator's influence in his own and in foreign lands. In the case of *Rousseau* the biographical treatment is almost entirely incidental to a discussion of his *Emile*, while with Pestalozzi and Horace Mann, whose pedagogical labors were well-nigh coextensive with their long and heroic lives, the biographical details extend through the entire work.

It is a truism of today that an understanding of the political, social, and intellectual conditions of the epoch in which a great man lived and wrought, and from which he drew his inspiration, is a prerequisite to any sympathetic and adequate appreciation of the reforms that he effected in thought or in practice. In this respect M. Compayré's otherwise admirable little books fail to make good the promise of their initial preface. The abundant opportunities offered by the study of *Rousseau* to sketch the social, intellectual, and moral ferment in the France of Voltaire and Diderot, its artificial education, vividly reflecting a no less artificial mode of life, its extreme rationalism and skepticism, forcing *Rousseau* and the succeeding generation into the reaction of naturalism, have been almost completely ignored. Nor has this defect been remedied in the other volumes. The stubborn conservatism of the English public schools in the middle of the nineteenth century, their indifference to the method and

achievements of science, provoked the scathing criticism of Thomas Huxley that "at school and at college you shall know of no source of truth but authority; nor exercise your reasoning upon anything but deduction from that which is laid down by authority."¹ This one-sided view of education was in part responsible for Herbert Spencer's undue emphasis upon science and surely deserves mention. Furthermore, without some conception of the evils of the district-school system, as they revealed themselves in the Massachusetts of Horace Mann's day, how can the reader gain a satisfactory appreciation of the reforms accomplished by that untiring educational enthusiast?

In the work on Montaigne the author has devoted nearly half the book to a detailed and sympathetic study of the somewhat Protean character of this charming essayist. Although this analysis undoubtedly presents the complex personality of Montaigne in clear relief, it is questionable whether his critic has not sacrificed matters of more import to the student of education in order to effect this result. A chapter dealing with the vitalizing influence of the French Renaissance upon learning in general, and the slow response of educational institutions to the new ideals and spirit would have added much to the value of the book by lending force to the pungent criticisms of Montaigne directed against the verbal and pedantic education of his age. Here again, the author has failed to furnish the background which is needed in order to estimate justly the constructive theory as well as the destructive criticism of Montaigne.

In his analysis and exposition of the theories of the educators under consideration, M. Compayré has been distinctly more successful. In each of the six volumes the reader may become thoroughly acquainted with all that is basic and vital in the thought and achievement of these men. Moreover, wherever possible, as in the case of Herbart, the author has succeeded in showing the interdependence of the educator's philosophy, psychology, and pedagogy, and has related these aspects of his thought into a unified system.

A consideration of the author's critical passages reveals much that is sound, less that is original. Indeed, it would perhaps be too much to expect that a blaze of fresh light should be thrown upon the educational opinions of such well-known and widely discussed theorists as Rousseau, Pestalozzi, and Herbart. As M. Compayré points out, a Herbartian bibliography of nearly two hundred pages is contained in Rein's *Encyklopädisches Handbuch der Pädagogik*, and the Pestalozzian literature is almost equal in amount. Nevertheless the reader may extract much helpful criticism from these volumes. For example, in his discussion of Herbart's four steps, or "moments" of instruction, M. Compayré writes suggestively: "How can we resign ourselves to thinking that such a complicated method, such rigorous regulations, are the last word in the art of educating human beings . . . ? Is it not possible that Herbart has confused the course of instruction with the evolution of science?"²

On the whole, the work of translation has been adequately and, at times, very successfully performed, in spite of the occasional admission of "gritty" sentences and awkward turns of expression. These latter are few in number, whereas such telling characterizations as the following of Rousseau are numer-

¹ Huxley, "A Liberal Education," essay in *Science and Education*, p. 94.

² *Jean Frederic Herbart*, p. 75.

ous: "A friend of virtue rather than virtuous, agitated rather than active, a slave to his sensations when he would fain have been the apostle of liberty . . . in the torrent of his life he mingled muddy waters with the purest streams."³

Throughout this series, frequent quotations are made, but in only a few instances is the reader given definite information as to their source. Needless to say, the whole work would be rendered more scholarly, as well as more helpful to the student in guiding his study of the sources, were all references made as exact as possible.

These six little volumes should be welcomed by teachers of the history of education as valuable reference books for the general student. They are logical in development, broad and generous in treatment, and inspired by the idealistic and kindly spirit of their author who regards true "criticism as that which insists upon the good and deals with the bad only to explain it."⁴

WILLYSTINE GOODSELL

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Theories of Style in Literature. With Especial Reference to Prose Composition, Essays, Excerpts, and Translations. Arranged and adapted by LANE COOPER. New York: Macmillan, 1907. Pp. 460. \$1.10.

Few recent books should appeal more strongly to teachers of English than Professor Cooper's *Theories of Style*. Excellent in tone, selections, notes, and comments, it is a worthy textbook for college classes, and a splendid reference-book for teachers of English in secondary schools. Professor Cooper has departed from the usual line of such books—selections garnished with a few sprigs of savory criticism—and has produced a book of solid nourishment. But our unreserved commendation calls for a more specific analysis of this volume.

First of all the book is notable for its wise and catholic selections. If there be any false step in the book, it is probably in the introductory chapter, containing Professor Cooper's translation of Wackernagel's "Theory of Prose and Style." Wackernagel's name is not so widely known as the other writers on the theory of style, and his essay is not remarkably acute in its discussions of the nicer qualities of style. It is, however, solid, scholarly, and weighty; and, moreover, it voices Professor Cooper's own ideas on the subject. These two reasons may justify its inclusion in the book and its premier place of honor. Of the other essays in the book there can be but little discussion. Following the introductory essay are selections from Plato, Aristotle, Longinus, "On the Sublime" (entire), Swift, Buffon, Voltaire, Goethe, Coleridge, DeQuincey, Thoreau, Schopenhauer, Spencer, Lewes, Stevenson, Pater, Brunetière, and Frederick Harrison. Each of the selections is prefaced by a scholarly introductory note by the editor, and is followed by brief, terse, but elucidating and entertaining notes. The volume has a very complete bibliography on the theory of style, especially prose style. A few words concerning the author's purpose in issuing the book will further reveal the value of the volume.

³ Jean Jacques Rousseau, p. 114.

⁴ Jean Jacques Rousseau, p. 4.

These selections may be regarded, according to the editor, as a body of literary models based upon a single theme—the theory of style. Most books of literary models, insists Professor Cooper, are a collection of literary scraps, beginning with a description of a glacier and ending with a chapter from Darwin's *Descent of Man*. Such miscellaneous selections are lacking in the power of co-ordinating the processes of the youthful brain. Such a feast of scraps must, pedagogically speaking, end in scraps of expression. Form and substance, expression and knowledge ought never to be broken. Few teachers will disagree with Professor Cooper on this point.

Another possible application of the volume is the opportunity of doing some purely theoretical investigation of the *essay* and the *address* on style. Such a research, however, lies beyond the secondary pupil. Again, the book may serve as a book of reference, for it contains those historic utterances on style arranged in rough chronological order—with the exception of Wackernagel's essay—which are necessary for even a complete casual acquaintance with the development of prose style. Even secondary pupils, we believe, will read much in this book which will interest them more, and have more direct results than the reading of less soulless rhetorics.

Whether or not we have justified our enthusiasm for Professor Cooper's book is immaterial. It may be that the credit for our pleasure and profit in reading the volume should be given to the classic discourses themselves. Let the praise fall where it will, on the classic utterances or on the editor's judicious management of the essays, or on both, we are confident that if teachers of English who do not know the historic course of prose and theory, will read this book diligently they will thank Professor Cooper for bringing such a wealth of knowledge and profit to them in such compact form.

Selections from Byron: "The Prisoner of Chillon," "Mazeppa," and Other Poems. Edited, with Introduction and Notes, by SAMUEL MARION TUCKER. Boston: Ginn & Co., 1907. Pp. 101. \$0.25.

Forty-three pages of introduction, treating Byron's importance as a historic figure, and his intimate relationship with his works, to one hundred and one pages of Byron's poems, is, we believe, a poor proportion. Such however, is the proportion in Professor Tucker's *Selections from Byron*. The notes are meager and pedestrian; the introductions to the longer poems, such as the "Prisoner of Chillon" and "Mazeppa," are instructive and entertaining. The introduction to the book is good and well balanced.

Written and Oral Composition. By MARTIN W. SAMPSON AND ERNEST O. HOLLAND. New York: American Book Co. Pp. 293.

Professors Sampson and Holland have produced a book intended to meet, no doubt, the conditions as they have found them in the viliatic secondary schools of Indiana. That the schools of Indiana should need such a book speaks rather ill of the schools but well of the authors of the book. The lack of brain stuff in the volume is no evidence of a similar lack in the authors' heads, but rather it is a sad commentary on what they have evidently found in the heads of their prospective students at the University of Indiana. Beginning with such elementary assignments as to write a short story on "A Basket," "A

Dog," "A Monkey," "A Boy," the authors proceed in easy, careful steps to narrations on "A Timid Girl," "A Camera," to "How We Reached Home," and to the more elevating and involved themes of "A Careless Lawyer" and "A Church." Passing over the lessons on "Descriptions" and "Exposition," we come to such themes in argumentation as "Ought We to Have Six School Days a Week?" "Is It Our Duty to Be Cheerful?" and "Ought There to Be Freedom of the Press?"—themes that might be called lollipops. But the face of the schoolmaster is nowhere more apparent than in a diverting and entertaining discourse on "How to Stand and Speak." In part this advice reads as follows: "When you practice your talk, stand straight, with feet together, arms hanging at the side, and head erect. This position will be easy, if you remember to get your weight forward. Before you begin to speak, put your heels together and rise on your toes; stand there a moment and then drop the heels slowly, keeping the weight poised on the balls of the feet. Then stand still." Such advice is, we admit, admirable, but we do not recall any such directions in any other book on composition. Hence, such a consideration gives a distinctive and unique flavor to the book. Personally we hold the authors in high esteem, but we cannot check the humor that arises in reading this discourse. Let us hope that the conditions in the study of English in other states are not similar to those that Professors Sampson and Holland have found in Hoosierdom.

H. E. COBLENTZ

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A Source Book of Greek History. By FRED M. FLING. New York: D. C. Heath & Co., 1907. Pp. 370. \$1.

Among the numerous source books that have appeared during late years this is remarkable as the first adequate book in the attractive field of Greek history. Teachers of history are familiar with the source pamphlets of Professor Fling issued some years ago by the University of Nebraska. This book is a more serious attempt in the same field.

The preface indicates that the author's intention is to produce a book adapted to the needs of secondary schools. With ancient history compressed into the Procrustean bed devised by the Committee of Seven it is hard to find time to use the sources. Ambitious and enthusiastic teachers, who have such aim, will find in this book a helpful guide as to material and method, and an excellent work for the reference shelf. Except in the case of advanced classes, where the students might advantageously purchase the book, the duplication of copies for reference is possibly the best method of using it. It is needless to say that Professor Fling holds up a high ideal. The average pupil might find some of the questions difficult to comprehend and more difficult to answer. It is doubtful whether the so-called source method or comparison of the sources can be used to any advantage with the younger pupils, although it is certainly desirable that every pupil should have acquaintance with the sources.

The book covers the whole course of Greek history, the authors quoted ranging from Homer to Polybius. The selections represent not simply the political and military phases of history, for the scope of the book is shown by

such captions as "Oracles, Games and Festivals," "Greek Life and Thought as Reflected in the Drama," "Socrates and His Teaching." The author has an evident enthusiasm for Greek art, literature, and philosophy. His remarks in the preface relative to the methods of using this kind of illustrative material are worth the attention of every teacher of Greek history. It is unfortunately true, however, that the teacher as a rule finds that the time and means for such work are not at hand. The political and military phases of history are less difficult to teach acceptably, and under the present sway of entrance examinations they are sure to retain their time-honored importance. In view of the author's attitude, however, we might expect more representative selections from Greek literature.

In plan the book follows the chronological method of arranging the material. This seems to me to be distinctly superior to the topical method as employed by other books.

The selections are carefully made. For instance, those on Socrates are not taken at random from the *Memorabilia*, but are adapted to bring out the nature of the charge and Xenophon's conviction of its injustice as based upon the character of his master's life. They are as a rule eminently usable. The great value of the book, therefore, lies in the fact that by the selective process of practical experience the author has eliminated the recondite, the complex, the nonessential, with a large measure of success. As an exception it might be objected that the selections on colonization involve a too minute geographical knowledge. In my opinion too much space is given to wars and particularly to the descriptions of battles. Instead, we might have such illuminating views of Greek institutions as are found in Aristotle and Plato. Aristotle's comments on ostracism and Plato's ironic description of democracy are certainly intelligible to any high-school pupil. In the description of Spartan institutions Plutarch is to be preferred to Xenophon. In the forty-five pages devoted to the Persian War the entire omission of the significant Ionian Revolt is remarkable. We miss the familiar chapters of Plutarch on the art policy of Pericles and the reflections on revolution in Thucydides. It seems unfair not to allow Euripides to answer Sophocles and Plato's Socrates to complement that of Xenophon. In general criticism, it might be said that the selections appeal to the historical, rather than the classical, scholar. As an instance inscriptions are entirely omitted. Some of the longer selections might well have been divided up for convenience of reference. The references should be uniformly to the book and chapter of the classical author rather than to the pagination of a translation.

The questions are well put and logically arranged. They are adapted to bring out political conditions and tendencies in a cumulative way. As an instance, note the questions on Demosthenes. The labor and care involved in formulating these sets of questions will be appreciated by every practical teacher.

The illustrations are happily chosen and as a rule the reproductions are excellent. The suggestive field of vase painting hardly receives due attention, however, and the entire absence of coins is remarkable. The remarks and questions on the illustrations will prove suggestive and valuable, for most students are oblivious to the fine illustrations in many of our histories.

The book is well made. Binding, paper, and print are satisfactory.

ARTHUR F. BARNARD

THE UNIVERSITY OF CHICAGO HIGH SCHOOL

A Tuscan Childhood. By LISI CIPRIANI. New York: The Century Co., 1907. \$1.25 net.

The life of the average American calls for a certain versatility in meeting a fair range of practical problems. This fact often leads him to fail to realize the value to all concerned of being able to take a position in thought far enough away from his usual experiences to enable him to make a fair comparison of the contrasting situations without being compelled to act at once.

Without going into other fields this has application in case of parents and teachers with reference to the life of children in home and school. Miss Cipriani has afforded us a series of glimpses into the life and experiences of two generations of Italian patrician children. The account given of things thought, done, said, and written by the seven, of whom she was the middle one, is much more significant because the important factor in their lives, the mother, is made so real to us as a child. An old Ghibelline family expelled from Florence returns to Tuscany after centuries of residence in Corsica, becomes Protestant, brings in German influence by marriage, and takes part in the liberation and unification of Italy. Here we have a background without which the conflict of tendencies in the education of the young family would be harder to understand.

Among the problems that come to mind as one reads the book are those of religious education in its individual, family, and community bearings; the division of labor between nurses, governesses, tutors, and parents; few associates versus many in early life; the varying elements made use of in providing a protected environment; the possibilities of language acquirement and use in early childhood; "forbidden fruit;" "no questions;" the respective places of invention and mechanism in punishment; the persistence of certain tendencies which we think require only more time to control; the division of labor between the English system for early experience years and health at all times and the German for "intellectual development." This last influence one finds a serious matter in Italy today where pressure from all sides tries to fit the hearty, outdoor Italian boy into a poor form of German secondary school, with its long hours and home study.

But this book is not a pedagogical treatise—the author has in mind the need we have for autobiographies of childhood and inserts original documents where she can do so, but everything combines to make a delightful, well-written story. One must not be led astray by Maxfield Parrish's illustration for the cover and consider this a story-book for young children. It has decidedly the adult point of view and some parents might object, even if the children cared to read it, to have them enter into the frank discussion found in it regarding the author's parents, especially the mother. Anyone taxed for stories to tell will find excellent material both for little ones and for after dinner. The book can well be placed in the high-school library and will also be of use to those who have to do with the training of teachers.

FRANK A. MANNY

NEW YORK CITY

BOOKS RECEIVED

EDUCATION

The Education and Problems of the Protestant Ministry. By DAVID SPENCE HILL. Worcester, Mass.: Clark University, 1908. Pp. 94.

Laboratory Work in Art Appreciation: Cornell Study Bulletin No. 1. By CHARLES DEGARMO. Syracuse: C. W. Bardeen, 1907.

Guide to High-School Observation: Cornell Study Bulletin No. 2. By G. M. WHIPPLE. Syracuse: C. W. Bardeen, 1908. Pp. 42.

The Catholic School System in the United States: Its Principles, Origin, and Establishment. By REV. J. A. BURNS. New York: Benziger Brothers. Pp. 415. \$1.25.

ENGLISH

Lyttelton's Last Days of Pompeii. (Macmillan's Pocket Classics.) Edited, with Introduction and Notes, by J. H. CASTLEMAN. New York: Macmillan, 1908. Pp. 481. \$0.25.

GERMAN

Goethe's Hermann und Dorothea. Edited, with Introduction, Notes, and Vocabulary, by RICHARD ALEXANDER VON MINCKWITZ. New York: C. E. Merrill & Co., 1908. Pp. 268. \$0.60.

SCIENCE

General Chemistry for Colleges. By ALEXANDER SMITH. New York: The Century Company, 1908. Pp. 539. Illustrated.

Elements of Physical Geography. By THOMAS CRAMER HOPKINS. Boston: Benj. H. Sanborn & Co., 1908. Pp. 484. Illustrated.

CIVICS

A Little Land and a Living. By BOLTON HALL. New York: The Arcadia Press, 1908. Pp. 287.

MISCELLANEOUS

The Christian Faith and the Old Testament. By JOHN M. THOMAS. New York: T. Y. Crowell & Co., 1908. Pp. 140. \$1.00.

Graded Games and Rhythmic Exercises. By MARION BROMLEY NEWTON; edited by ADA VAN STONE HARRIS. New York: A. S. Barnes & Company, 1908. Pp. 109. \$1.25.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS

IRENE WARREN

Librarian, School of Education, The University of Chicago

ALLEN, CHARLES R. Educational progress for 1907. *School R.* 16:296-319. (May, '08.)

A report by the Committee on Educational Progress of the Harvard Teachers' Association, read at the annual meeting of the association in Cambridge, Mass., March 7, 1908. A comprehensive report of the work of schools in the eastern part of the U. S.

ALLEN, WILLIAM H. A broader motive for school hygiene. *Atlan.* 101:824-30. (June, '08.)

A general statement of the physical condition of school children, the sanitary condition of school buildings, and the character of the instruction now given in school hygiene, with suggestions for improvement along these lines.

BABBITT, JAMES A. The sphere of the college director in college athletics and finances. *Amer. Phys. Educa.* 13:263-65. (May, '08.)

BRUCE, G. L. The new regulations for training colleges. *Educa. Rec.* 17:463-73. (Feb., '08.)

CARLTON, FRANK T. The relation between recent industrial progress and educational advance. *Pop. Sci. Mo.* 72:546-57. (June, '08.)

CORNELL, WALTER S. Mentally defective children in the public schools. *Psycholog. Clin.* 2:75-87. (May, '08.)

(The) course of study in the elementary school. *Elem. School T.* 8:469-553. (May, '08.)

This refers to the curriculum of the Elementary School in the University of Chicago.

CURTIS, HENRY S. The relation of the playgrounds to a system of physical training. *Amer. Phys. Educa.* 13:245-49. (May, '08.)

(The) dramatization of school work. *Out.* 89:93-94. (16 May, '08.)

Account of the celebration of the twenty-third anniversary of the Brooklyn Training School for Teachers, which was a pageant representing the history of education.

DOW, A. W. Theory and practice of teaching art. *Teach. Col. Rec.* 9:1-62. (May, '08.)

ELLISON, LOUISE. Children's capacity for abstract thought as shown by their use of language in the definition of abstract terms. *Amer. Journ. of Psy.* 19:253-60. (Ap., '08.)

ELSON, WILLIAM H. The technical high school of Cleveland. *School R.* 16:353-59. (June, '08.)

FALKNER, ROLAND P. Some further considerations upon the retardation of the pupils of five city school systems. *Psycholog. Clin.* 2:57-74. (May, '08.)

A discussion of Dr. Oliver P. Cornman's paper in the February number of this magazine on the retardation of pupils of five city school systems. The schools chosen were Camden, Kansas City, Boston, Philadelphia, and New York.

FINDLAY, MARIA E. Pedagogical literature in England. *School R.* 16:401-11. (June, '08.)

GOODWIN, EDWARD J. The New York system of secondary schools. *Educa. R.* 35:491-500. (May, '08.)

GOODWIN, EDWARD J. The school and the home. *School R.* 16:320-29. (May, '08.)

Read before the Harvard Teachers' Association, March 7, 1908.

(A) great municipal college. *Out.* 89:142-43. (23 May, '08.)

An account of the dedication of the new buildings of the College of the City of New York.

HIRSCH, EMIL G. The moral aspect of industrial education. *Educa. R.* 35:449-54. (May, '08.)

A strong plea that "manual training be systematically made an integral part of the common-school course."

MANNY, FRANK A. The University Elementary School curriculum. *Elem. Sch. T.* 8:554-58. (May, '08.)

An outline of the curriculum of the University of Chicago Elementary School; this article, and an editorial which discusses Mr. Manny's criticism of the curriculum form the main part of the May number of the *Elementary School Teacher*.

Memorandum on nature-study and the teaching of science in Scottish schools. *Educa. News.* 2:463-68. (1 May, '08.)

MEYLAN, GEORGE L. The value of physical examinations of college students. *Amer. Phys. Educa.* 13:250-52. (May, '08.)

Gives tables of average measurements of Columbia University freshmen of 17, 18, and 19 years, and tables of repeated measurements of the same students after two years of required work in physical education.

PAULSEN, FRIEDRICH. Old and new-fashioned notions about education. *Educa. R.* 35:476-85. (May, '08.)

PEABODY, ENDICOTT. The training and responsibility of parents. *School R.* 16:281-95. (May, '08)

Report of address given before the Harvard Teachers' Association, March 7, 1908.

Pedagogy up to date. *Liv. Age* 257:377-78. (9 May, '08.)

A poem from *Punch*.

(A) Retrospect: Pt. 1, Foreign operations of the British and foreign school society, by W.; Pt. 2, The education of the poor in the eighteenth century, by Principal Salmon. *Educa. Rec.* 17:474-512. (Feb., '08.)

SACHS, JULIUS. The intellectual reactions of coeducation. *Educa. R.* 35:466-75. (May, '08.)

The Scandinavian-American educational exchange. *Out.* 89:51-60. (9 May, '08.)

SCHNEDER, D. B. German and English secondary schools compared. *Educa. R.* 35:455-65. (May, '08.)

SCOTT, FRED NEWTON. A substitute for the classics. *School R.* 16:360-69. (June, '08.)

SECOR, W. B. Credit for quality in the secondary school. *Educa. R.* 35:486-90. (May, '08.)

SHOWERMAN, GRANT. Mud and nails. *Educa. R.* 35:433-48. (May, '08.)

A college professor of literature watches the development of courses in agriculture, engineering and other sciences of practical benefit to mankind, as well as professional courses bringing large financial returns, with the result that he carefully analyzes to himself the value of the humanities and decides he is "ready to scorn lucrative positions and live laborious days for the sake of doing what both intuition and reason told him was the supremely worth while."

SUZZALLO, HENRY. Education as a social study. *School R.* 16:330-40. (May, '08.)

Address delivered at Harvard Teachers' Association, March 7, 1908.

(A) symposium on the value of humanistic, particularly classical, studies as a preparation for the study of theology from the point of view of the profession. *School R.* 16:370-90. (June, '08.)

I. MacKenzie, William Douglas. The place of Latin and Greek in the preparation for the ministry.

II. Nock, A. J. The value to the clergyman of training in the classics.

WHITAKER, NELLIE COMINS. The health of school girls. *School R.* 16:391-400. (June, '08.)

